105TH CONGRESS
2D SESSION

H. R. 3332

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 15, 1998

Received; read twice and referred to the Committee on Commerce, Science, and Transportation

AN ACT

To amend the High-Performance Computing Act of 1991 to authorize appropriations for fiscal years 1999 and 2000 for the Next Generation Internet program, to require the President's Information Technology Advisory Committee to monitor and give advice concerning the development and implementation of the Next Generation Internet program and report to the President and the Congress on its activities, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Next Generation Internet Research Act of 1998''.

SEC. 2. FINDINGS.

(a) IN GENERAL.—The Congress finds that—

(1) United States leadership in science and technology has been vital to the Nation's prosperity, national and economic security, and international competitiveness, and there is every reason to believe that maintaining this tradition will lead to long-term continuation of United States strategic advantages in information technology;

(2) the United States investment in science and technology has yielded a scientific and engineering enterprise without peer, and that Federal investment in research is critical to the maintenance of United States leadership;

(3) previous Federal investment in computer networking technology and related fields has resulted in the creation of new industries and new jobs in the United States;

(4) the Internet is playing an increasingly important role in keeping citizens informed of the actions of their government; and

(5) continued inter-agency cooperation is necessary to avoid wasteful duplication in Federal networking research and development programs.

(b) ADDITIONAL FINDINGS FOR THE 1991 ACT.—Section 2 of the High-Performance Computing Act of 1991 (15 U.S.C. 5501) is amended by—

(1) striking paragraph (4) and inserting the following:

''(4) A high-capacity, flexible, high-speed national research and education computer network is needed to provide researchers and educators with access to computational and information resources, act as a test bed for further research and development for high-capacity and high-speed computer networks, and provide researchers the necessary vehicle for continued network technology improvement through research.''; and

(2) adding at the end thereof the following:

''(7) Additional research must be undertaken to lay the foundation for the development of new applications that can result in economic growth, improved health care, and improved educational opportunities.

''(8) Research in new networking technologies holds the promise of easing the economic burdens of information access disproportionately borne by rural users of the Internet.

''(9) Information security is an important part of computing, information, and communications systems and applications, and research into security architectures is a critical aspect of computing, information, and communications research programs.''.

SEC. 3. PURPOSES.

(a) IN GENERAL.—The purposes of this Act are—

(1) to authorize, through the High-Performance Computing Act of 1991 (15 U.S.C. 5501 et seq.), research programs related to—

(A) high-end computing and computation;

(B) human-centered systems;

(C) high confidence systems; and

(D) education, training, and human resources; and

(2) to provide, through the High-Performance Computing Act of 1991 (15 U.S.C. 5501 et seq.), for the development and coordination of a comprehensive and integrated United States research program which will—

(A) focus on the research and development of a coordinated set of technologies that seeks to create a network infrastructure that can support greater speed, robustness, and flexibility than is currently available and promote connectivity and interoperability among advanced computer networks of Federal agencies and departments;

(B) focus on research in technology that may result in high-speed data access for users that is both economically viable and does not impose a geographic penalty; and

(C) encourage researchers to pursue approaches to networking technology that lead to maximally flexible and extensible solutions wherever feasible.

(b) MODIFICATION OF PURPOSES OF THE 1991 ACT.—Section 3 of the High-Performance Computing Act of 1991 (15 U.S.C. 5502) is amended by—

(1) striking the section caption and inserting the following:

"SEC. 3. PURPOSES.";

(2) striking ''purpose of this Act is'' and inserting ''purposes of this Act are'';

(3) striking subparagraph (A) of paragraph (1) and redesignating subparagraphs (B) through (I) as subparagraphs (A) through (H), respectively;

(4) striking ''Network'' and inserting ''Internet'' in paragraph (1)(B), as so redesignated by paragraph (3) of this subsection;

(5) striking ''and'' at the end of paragraph (1)(H), as so redesignated by paragraph (3) of this subsection;

(6) in paragraph (2), by striking ''efforts.'' and inserting ''network research and development programs;''; and

(7) adding at the end thereof the following:

''(3) promoting the more rapid development and wider distribution of networking management and development tools; and

''(4) promoting the rapid adoption of open network standards.''.

SEC. 4. NATIONAL HIGH-PERFORMANCE COMPUTING PROGRAM.

(a) PROGRAM ELEMENTS.—Subparagraphs (A) and (B) of section 101(a)(2) of the High-Performance Computing Act of 1991 (15 U.S.C 5511(a)(2)(A) and (B)) are amended to read as follows:

''(A) provide for the development of technologies to advance the capacity and capabilities of the Internet;

''(B) provide for high performance testbed networks to enable the research, development, and demonstration of advanced networking technologies and to develop and demonstrate advanced applications made possible by the existence of such testbed networks;''.

(b) ADVISORY COMMITTEE.—Section 101(b) of the High-Performance Computing Act of 1991 (15 U.S.C 5511(b)) is amended by striking ''HIGH-PERFORMANCE COMPUTING'' in the subsection heading.

SEC. 5. NEXT GENERATION INTERNET.

Title I of the High-Performance Computing Act of 1991 (15 U.S.C 5511 et seq.) is amended by adding at the end the following new section:

''SEC. 103. NEXT GENERATION INTERNET.

''(a) ESTABLISHMENT.—The National Science Foundation, the Department of Energy, the National Institutes of Health, the National Aeronautics and Space Administration, and the National Institute of Standards and Technology may support the Next Generation Internet program. The objectives of the Next Generation Internet program shall be to—

''(1) support research, development, and demonstration of advanced networking technologies to increase the capabilities and improve the performance of the Internet;

''(2) develop an advanced testbed network connecting a significant number of research sites, including universities, Federal research institutions, and other appropriate research partner institutions, to support networking research and to demonstrate new networking technologies; and

''(3) develop and demonstrate advanced Internet applications that meet important national goals or agency mission needs, and that are supported by the activities described in paragraphs (1) and (2).

''(b) DUTIES OF ADVISORY COMMITTEE.—The President's Information Technology Advisory Committee (established pursuant to section 101(b) by Executive Order No. 13035 of February 11, 1997 (62 F.R. 7131), as amended by Executive Order No. 13092 of July 24, 1998), in addition to its functions under section 101(b), shall—

''(1) assess the extent to which the Next Generation Internet program—

''(A) carries out the purposes of this Act; and

''(B) addresses concerns relating to, among other matters—

''(i) geographic penalties (as defined in section 7(1) of the Next Generation Internet Research Act of 1998);

''(ii) the adequacy of access to the Internet by Historically Black Colleges and Universities, Hispanic Serving Institutions, and small colleges and universities (whose enrollment is less than 5,000) and the degree of participation of those institutions in activities described in subsection (a); and

''(iii) technology transfer to and from the private sector;

''(2) review the extent to which the role of each Federal agency and department involved in implementing the Next Generation Internet program is clear and complementary to, and non-duplicative of, the roles of other participating agencies and departments;

''(3) assess the extent to which Federal support of fundamental research in computing is sufficient to maintain the Nation's critical leadership in this field; and

''(4) make recommendations relating to its findings under paragraphs (1), (2), and (3).

''(c) REPORTS.—The Advisory Committee shall review implementation of the Next Generation Internet program and shall report, not less frequently than annually, to the President, the Committee on Commerce, Science, and Transportation, the Committee on Appropriations, and the Committee on Armed Services of the Senate, and the Committee on Science, the Committee on Appropriations, and the Committee on National Security of the House of Representatives on its findings and recommendations for the preceding fiscal year. The first such report shall be submitted 6 months after the date of enactment of the Next Generation Internet Research Act of 1998 and the last report shall be submitted by September 30, 2000.

''(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated for the purposes of this section—

''(1) for the Department of Energy, $22,000,000 for fiscal year 1999 and $25,000,000 for fiscal year 2000;

''(2) for the National Science Foundation, $25,000,000 for fiscal year 1999 and $25,000,000 for fiscal year 2000, as authorized in the National Science Foundation Authorization Act of 1998;

''(3) for the National Institutes of Health, $5,000,000 for fiscal year 1999 and $7,500,000 for fiscal year 2000;

''(4) for the National Aeronautics and Space Administration, $10,000,000 for fiscal year 1999 and $10,000,000 for fiscal year 2000; and

''(5) for the National Institute of Standards and Technology, $5,000,000 for fiscal year 1999 and $7,500,000 for fiscal year 2000.

Such funds may not be used for routine upgrades to existing federally funded communication networks.

SEC. 6. STUDY OF EFFECTS ON TRADEMARK RIGHTS OF ADDING GENERIC TOP-LEVEL DOMAINS.

(a) STUDY BY NATIONAL RESEARCH COUNCIL.—Not later than 30 days after the date of enactment of this Act, the Secretary of Commerce shall request the National Research Council of the National Academy of Sciences to conduct a comprehensive study, taking into account the diverse needs of domestic and international Internet users, of the short-term and long-term effects on trademark rights of adding new generic top-level domains and related dispute resolution procedures.

(b) MATTERS TO BE ASSESSED IN STUDY.—The study shall assess and, as appropriate, make recommenda-

tions for policy, practice, or legislative changes relating to—

(1) the short-term and long-term effects on the protection of trademark rights and consumer interests of increasing or decreasing the number of generic top-level domains;

(2) trademark rights clearance processes for domain names, including—

(A) whether domain name databases should be readily searchable through a common interface to facilitate the clearing of trademark rights and proposed domain names across a range of generic top-level domains;

(B) the identification of what information from domain name databases should be accessible for the clearing of trademark rights; and

(C) whether generic top-level domain registrants should be required to provide certain information;

(3) domain name trademark rights dispute resolution mechanisms, including how to—

(A) reduce trademark rights conflicts associated with the addition of any new generic top-level domains; and

(B) reduce trademark rights conflicts through new technical approaches to Internet addressing;

(4) choice of law or jurisdiction for resolution of trademark rights disputes relating to domain names, including which jurisdictions should be available for trademark rights owners to file suit to protect such trademark rights;

(5) trademark rights infringement liability for registrars, registries, or technical management bodies;

(6) short-term and long-term technical and policy options for Internet addressing schemes and the impact of such options on current trademark rights issues; and

(7) public comments on the interim report and on any reports that are issued by intergovernmental bodies.

(c) COOPERATION WITH STUDY.—

(1) INTERAGENCY COOPERATION.—The Secretary of Commerce shall—

(A) direct the Patent and Trademark Office, the National Telecommunications and Information Administration, and other Department of Commerce entities to cooperate fully

with the National Research Council in its activities in carrying out the study under this section; and

(B) request all other appropriate Federal departments, Federal agencies, Government contractors, and similar entities to provide similar cooperation to the National Research Council.

(2) PRIVATE CORPORATION COOPERATION.—The Secretary of Commerce shall request that any private, not-for-profit corporation established to manage the Internet root server system and the top-level domain names provide similar cooperation to the National Research Council.

(d) REPORTS.—

(1) IN GENERAL.—

(A) INTERIM REPORT.—After a period of public comment and not later than 4 months after the date of enactment of this Act, the National Research Council shall submit an interim report on the study to the Secretary of Commerce.

(B) FINAL REPORT.—After a period of public comment and not later than 9 months after the date of enactment of this Act, the Na-

tional Research Council shall complete the study under this section and submit a final report on the study to the Secretary of Commerce. The final report shall set forth the findings, conclusions, and recommendations of the Council concerning the effects of adding new generic top-level domains and related dispute resolution procedures on trademark rights.

(2) SUBMISSION TO CONGRESSIONAL COMMITTEES.—

(A) INTERIM REPORT.—Not later than 7 days after the date on which the interim report is submitted to the Secretary of Commerce, the Secretary shall submit the interim report to the Committee on Commerce, Science, and Transportation and the Committee on the Judiciary of the Senate, and to the Committee on Commerce, the Committee on Science, and the Committee on the Judiciary of the House of Representatives.

(B) FINAL REPORT.—Not later than 7 days after the date on which the final report is submitted to the Secretary of Commerce, the Secretary shall submit the final report to the Committee on Commerce, Science, and Trans-

portation and the Committee on the Judiciary of the Senate, and to the Committee on Commerce, the Committee on Science, and the Committee on the Judiciary of the House of Representatives.

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $800,000 for the study conducted under this section.

SEC. 7. DEFINITIONS.

(a) IN GENERAL.—For purposes of this Act—

(1) GEOGRAPHIC PENALTY.—The term ''geographic penalty'' means the imposition of costs on users of the Internet in rural or other locations, attributable to the distance of the user from network facilities, the low population density of the area in which the user is located, or other factors, that are disproportionately greater than the costs imposed on users in locations closer to such facilities or on users in locations with significantly greater population density.

(2) INTERNET.—The term ''Internet'' means the international computer network of both Federal and non-Federal interoperable packet switched data networks.

(b) ADDITIONAL DEFINITION FOR THE 1991 ACT.—Section 4 of the High-Performance Computing Act of 1991 (15 U.S.C. 5503) is amended—

(1) by redesignating paragraphs (4) and (5) as paragraphs (5) and (6), respectively; and

(2) by inserting after paragraph (3) the following new paragraph:

''(4) 'Internet' means the international computer network of both Federal and non-Federal interoperable packet switched data networks;''.

Passed the House of Representatives September 14, 1998.

Attest: ROBIN H. CARLE,

Clerk.